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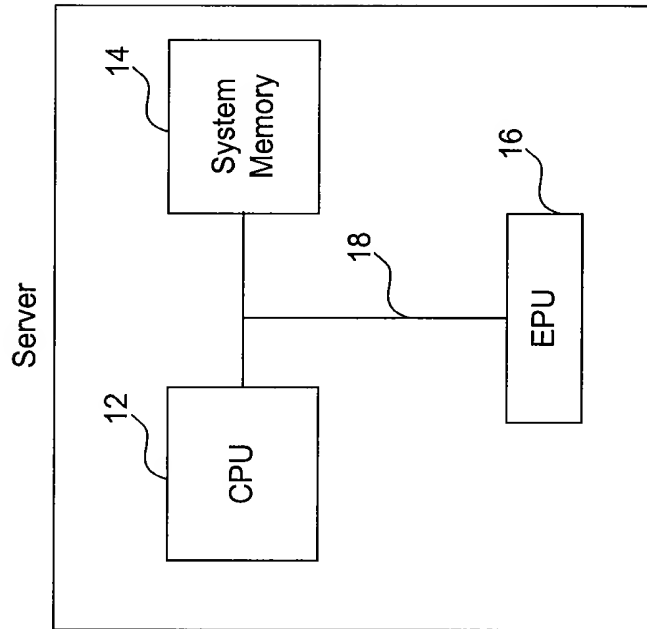


FIG. 1A

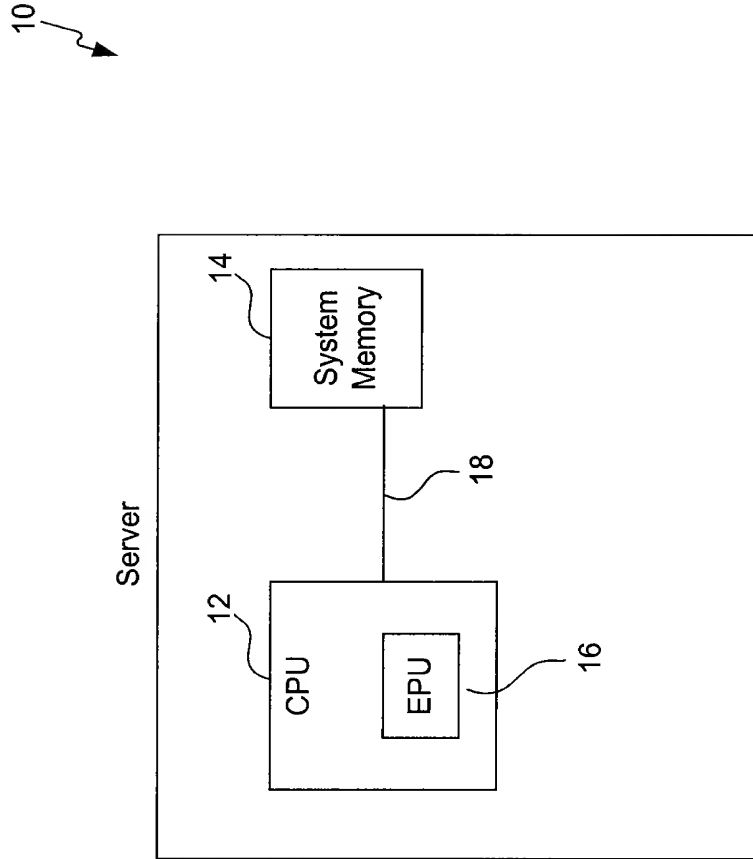


FIG. 1B

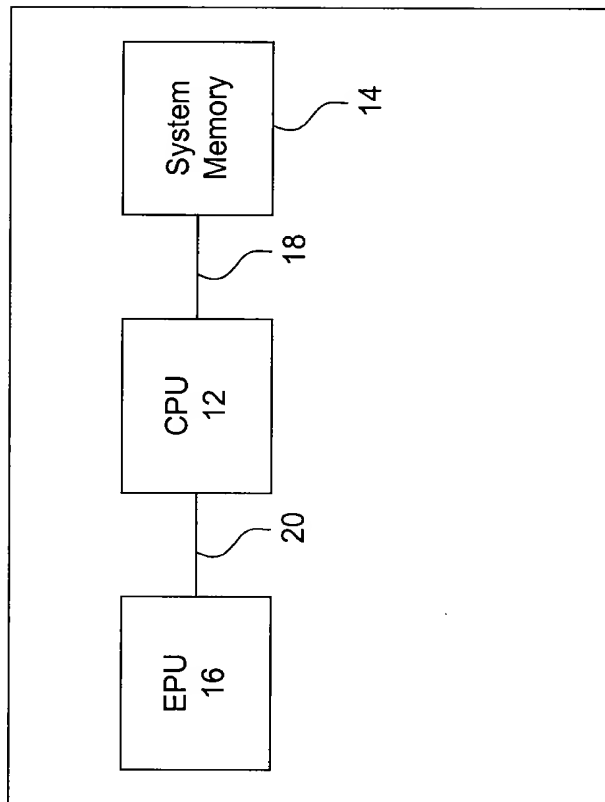


FIG. 1C

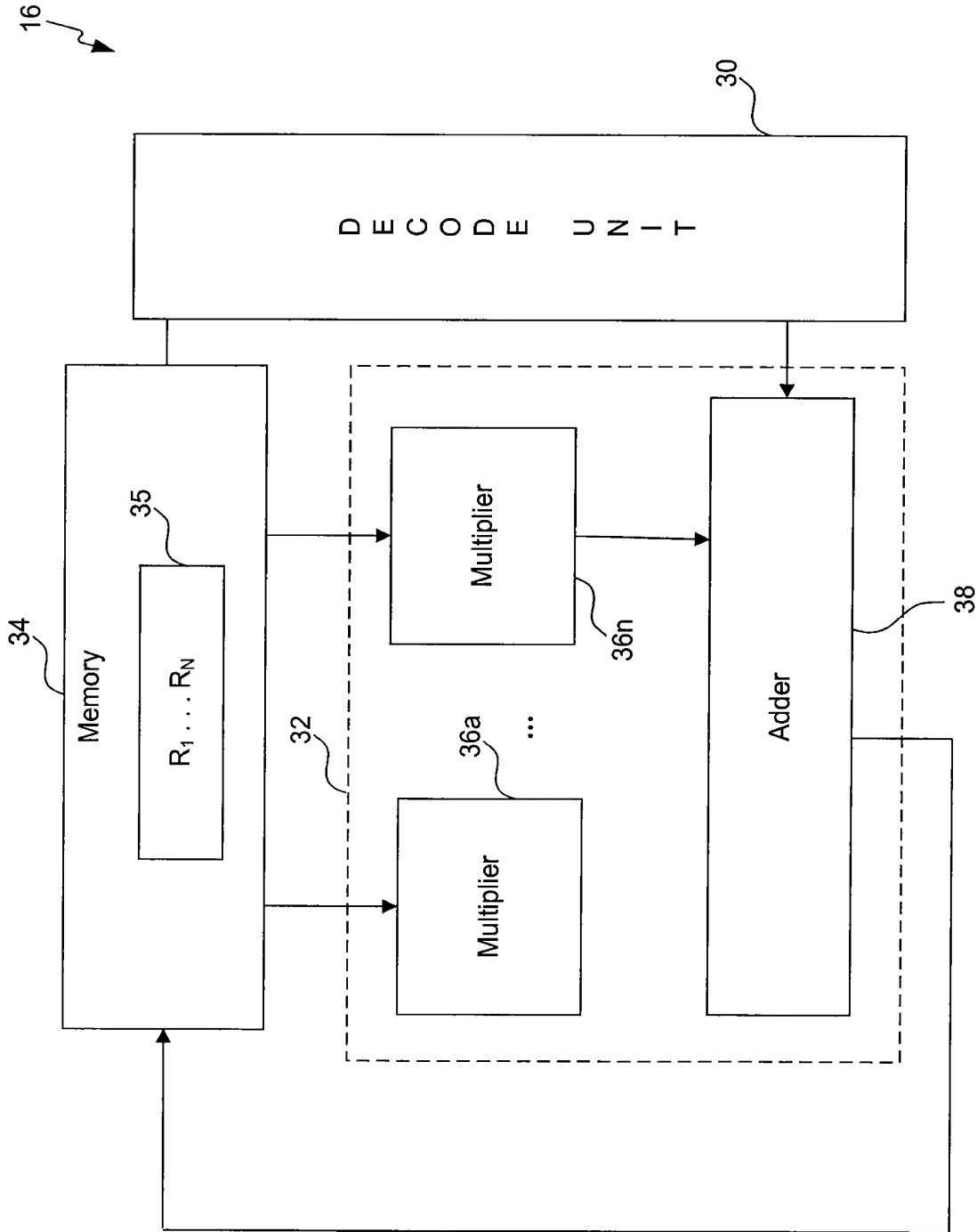


FIG. 2

<u>Product Operation</u>	
$\begin{array}{r} a_1 a_0 \\ b_1 b_0 \\ \hline \end{array}$	
Cycle One	
<div>Instruction</div> <div>MULT R1 a_1, b_1 a_0, b_0</div>	<div>Description</div> <div>$a_1 b_1$ and $a_0 b_0$ are simultaneously multiplied and the result is stored in Register R1</div>
Cycle Two	
<div>MAC R2 (a_1, b_0), R1</div>	<div>$a_1 b_0$ are multiplied and the product is added with the contents of R1 and stored in R2</div>
Cycle Three	
<div>MAC R3 (b_1, a_0), R2</div>	<div>$a_0 b_1$ are multiplied and the product is added with the contents of R2 and stored in R3</div>

FIG. 3

Square Operation

$$\begin{array}{r} a_1 a_0 \\ a_1 a_0 \\ \hline a_1 a_1 a_0 a_0 \\ 2a_1 a_0 \end{array}$$

		<u>Description</u>	
Cycle One	<u>Instruction</u>	MULT R1 $a_1, a_1 a_0, a_0$	
		$a_1 a_1$ and $a_0 a_0$ are multiplied and stored in Register R1	
Cycle Two		$a_1 a_0$, are multiplied and shifted by one and then added to the contents of R1. The result is stored in R2	
	<u>Instruction</u>	MAC 2X R2 (a_1, a_0), R1	

FIG. 4

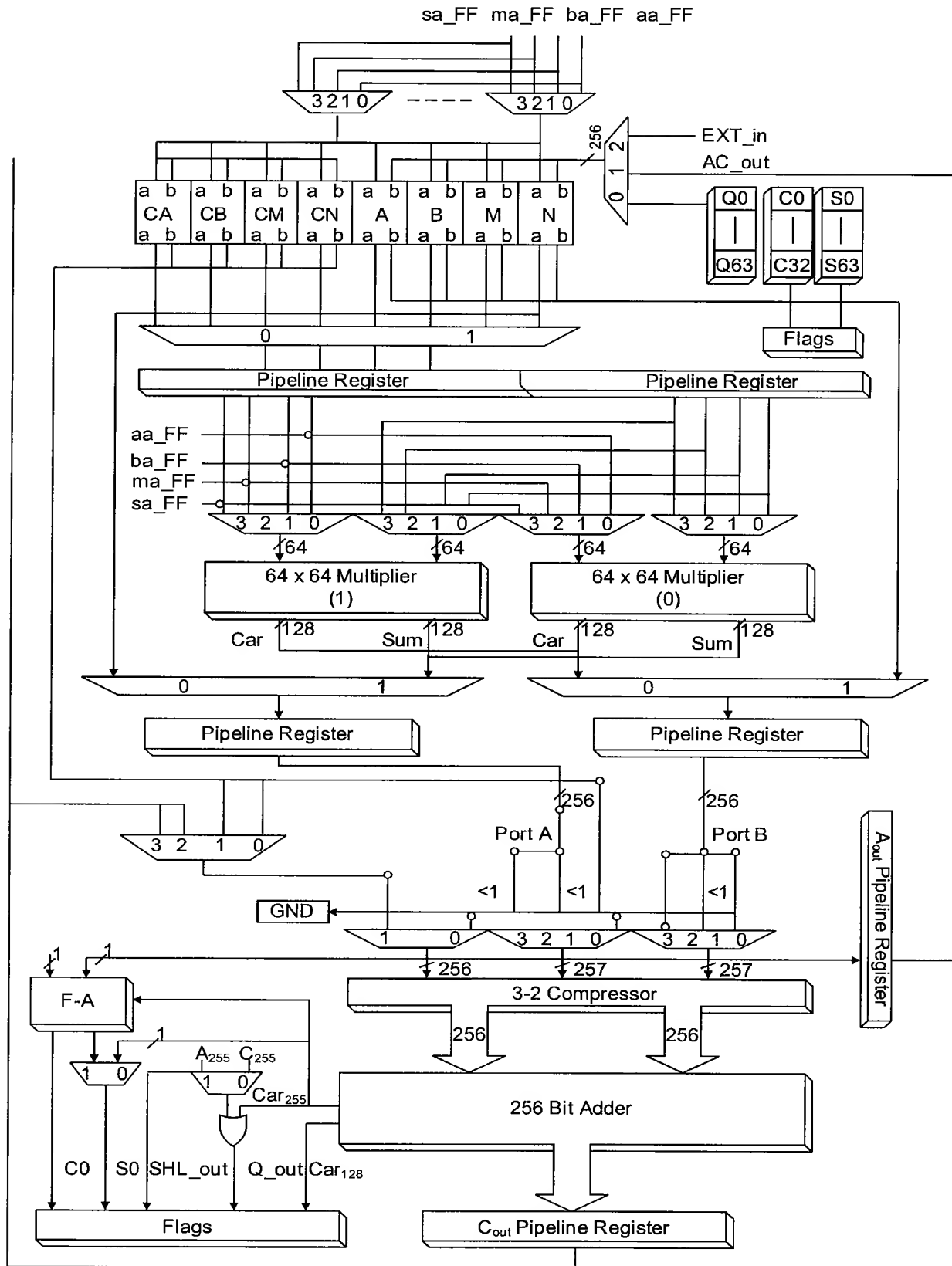


FIG. 5